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ABSTRACT

The author critically analyzes the current American educational system and philosophy, with emphasis on educational needs of handicapped children. He finds special educators often are not aware of the different language required to communicate with the general public, influence molders, decision makers, professionals, and academicians. He believes that the public has serious doubts about the current system's ability to improve and hypothesizes that the system fails to solve educational and social problems because the society itself is not organized to solve these problems. The American educational system is thought to be an educational non-system, for it stresses autonomous units and self contained operations, not integrated and responsive operations. Because there is little foreseeable hope that the near future will produce 79,000 additional specialists needed in emotional disturbance alone, the author speculates that educational technology and mass media may have to play greater roles. System elements thought to be needed in the field of special education are discussed such as, planning and evaluation on a national level, improved training of special educators, more sustained research and development, educational communication centers, and demonstration centers for materials and methods. (CB)

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THE SEARCH FOR THE EDUCATIONAL SYSTEM THAT DOESN'T EXIST

James J. Gallagher

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Many people have remarked that special education seems to be at a watershed at this time. It's one of those times where substantial change seems to be in the wind. What we really have to decide is whether the change will be an improvement or just a difference. We do seem to be in danger of engaging again in a relatively fruitless discussion similar to the "special class versus regular class" one, only this time it will be the virtues of a special class versus the virtues of itinerant teacher-resource room programs.

In my opinion, what is needed is not any simple shift from one administrative device to another at the local level but a change in the entire system, or nonsystem, so that we can build a concept of continuous improvement into the enterprise itself. It has been noted that the whole educational enterprise faces change in a fashion similar to a hippopotamus rising from the mud of a river bank. The amount of energy that seems needed to accomplish this feat makes you certain that once this change is made it is not likely to occur again for some time. We don't need this kind of convulsive one shot change in education. What we do need is a better understanding of the system that is required to inject an expectation of continuous improvement into the educational enterprise.

If we accept the proposition that there is no genuine educational system in place today, then we would need to look at what linkages are necessary in order to create the bonds that will be required in a future special educational system. The call for better support systems is not a new one, but the support services themselves need to be organized more effectively than in the past. At the present time, practically all of the support services seem to emanate from one undifferentiated multipurpose organization called the university. The doubts of the public about education have enlarged to include the university, as well as the public schools.

While at the Bureau of Education for the Handicapped in the Office of Education, I had a very experienced information offer, Lee Ross, who tried to educate me in regard to the large number of publics that any educator has to communicate with. Some of these publics should be labeled:

General public. This is the aggregate of persons who pay the bill for education, who vote on school bond issues, and who get most of their information through the daily paper and the TV.
Influence molders. This is a group representing the mass media, magazines, local radio stations, and the powerful persons who control and distribute information delivered to the general public.
Decision makers. Here we have a special group of executives and legislators and those people who bring powerful pressures to bear on key executive and legislative departments for the information or change of policy related to specific problems.
Professional. This refers to the large number of teachers and other educators whose primary purpose is to deliver educational services to children.
Academic. This is the relatively small but influential group of scholars who are in positions of leadership in universities.

Unless we translate from our language into the prime language of the group with whom we are trying to communicate, we may find ourselves limited to the single group that knows how to speak our own tongue.

It is important to separate these groups in your thinking because each speaks a separate language and has markedly different objectives and methods. Unless we translate from our language into the prime language of the group

with whom we are trying to communicate, we may find ourselves limited to the single group that knows how to speak our own tongue. The general failure of the academic community to communicate with the professionals, the decision makers, and the general public may be accounted for, in some measure, by the attempt to talk to them in academicese, instead of becoming multilingual or even hiring a translator to make sure the message gets across.

Doubts About Education's Ability to Improve

There can no longer be much doubt that in America one or more of the above described publics have grown increasingly skeptical about the values of public education. The sharp increase in school bond rejections, the lack of solid political support for major educational funds, and the new cry for accountability are all symptoms of an important estrangement.

With evidence all around us of our inability to provide good education for the disadvantaged, no great changes or modifications seem to be being put into place or even discussed.

I would like to share with you what I think the recent wave of popularity for such terms as *accountability, performance contracting,* and *educational vouchers* really means. I believe that demands for accountability represent a suspicion that the schools are not doing a good job. Accountability will provide the publics with the evidence to support that suspicion. The public seems tired of all the input descriptions — the number of teachers, the curriculum programs, or the new plan and now wants some output figures. In other words, what happens as a result of all of this input? The interest in performance contracting represents a strong public willingness to let somebody else take a crack at the problems that the schools seem to be unable, or unwilling, to deal with. Educational vouchers would give the consumer some control over how he spends his educational dollar and would represent the feeling that a strong carrot and stick approach is needed to force change, since the schools will not reform themselves.

We can all agree that the American educational enterprise like other large and complex entities does not reform itself too easily. With evidence all around us of our inability to provide good education for the disadvantaged, no great changes or modifications seem to be being put into place or even discussed.

In special education we have had increasing evidence available to us in a number of special fields. For example, the lack of positive gains for the special class programs for EMR, the limited educational output from either the oral or manual approach for the deaf, and the spontaneous remission of without treatment have not caused a major reorganization of services. Well, why? Is it stupidity, weakness, or self interest that is keeping us from more intelligent programing?

We have a characteristically human way of dealing with such — the decapitation of the guilty. We fire superintendents and chancellors, we elect different public officials in a vain attempt to purge ourselves of the evil and incompetent, and we seek the man or woman on a white horse who will save us. For the sake of simplicity we should hope that evil men are our root problem, but history tells us that it really isn't so. I suggest instead an alternative hypothesis to explain the slowness of the educational establishment to act:

We fail to solve educational and social problems because we are not organized as a society to solve those problems.

The Educational Non-System

We have an educational tradition that stresses autonomous units and self contained operations rather than interactive, mutually responsive elements.

The "American Educational System" as a concept is both a misnomer and an oversimplification. First, we don't have a true system in the usual sense of that word. A *system* requires a combination of elements functioning in a relationship to one another. We have an educational tradition that stresses autonomous units and self contained operations rather than interactive, mutually responsive elements. There is both strength and worth in the American educational tradition of diversity, but the unique demands of today and beyond require that we forge a system that can relate effectively to continuous new developments, while preserving the best of what we now have.

A transportation system or telephone system illustrates this linkage. Our schooi districts and other education organizations very often operate in a manner that would indicate apparent unconsciousness of the very existence of one another. Most districts still operate as isolated service units that have evolved from local practices. Above all, they rarely plan ahead, staggering instead from one crisis to another.

The current educational enterprise, based in considerable measure on decision making at the local level, has leaders who are not in a position or who do not have the authority to make major modifications affecting major system problems.

In the area of emotional disturbance, using a most conservative incidence figure of 2 percent, there are approximately 1.2 million disturbed children (ages 5-19) in need of special services in the United States . . . . we are short about 79,000 specialists.

A recognition of these problems has led to increasing pressure on schools to begin to adopt some form of program planning and budgeting. We don't need to go very far to search for useful applications of planning principles in special education. Let us take a quick look at some of the areas — emotional distrubance, learning disabilities, and mental retardation. The Bureau of Education for the Handicapped recently provided us with some highly provocative national statistics, drawn from reports of state departments of education and university training programs.

In the area of emotional disturbance, using a most conservative incidence figure of 2 percent, there are approximately 1.2 million disturbed children (ages 5-19) in need of special services in the United States. If we decided to provide full special education services to all children, we would be able to determine how many professionals we would need by establishing the accepted staff-child ratio. With the usually accepted 8 to 1 staff/student ratio we would need 150,000 specialists. But let us continue in our conservative mode and say that we will settle for giving special service to only 60 percent of the emotionally disturbed children by 1975. That means we will need only 90,000 specialists, not 150,000. How many do we have now? About 11,000. So we are short about 79,000 specialists (see Table 1).

At this time, we can begin discussing money. If the federal government would only relent and give more money for training, maybe the problem would be taken care of. Let's see if that is so — is money the problem? How many students are being turned out a year as specialists in this area? Using estimates that for every federal fellow there are two graduating from MS programs without support and four in undergraduate programs, we can estimate a total of 500 specialists per year are being graduated. Using 1970 as a base, it will take 158 years to meet the demand for personnel to provide service to 60 percent of the emotionally disturbed, or by the year 2128 we will be providing special services to 60 percent of those children in this area who need them.

But wait a minute; we haven't figured in yearly manpower attrition rates. We should expect to lose about 8 percent of the work force in any year through death, retirement, pregnancies, etc. Eight percent of the existing work force is about 900 persons. Since we are only turning out 500 a year, we aren't even getting our seed back. Doubling the program output at the federal level may allow us to break even. It should be obvious that we can't begin to meet our professional responsibilities that

TABLE 1

Special Education Manpower Needs – Estimation

Needed Information		*National Current Model Emotionally Disturbed*	*National Current Model Learning Disabilities*	*North Carolina Resource ED-MR-LD*
Children needing services (ages 5-19)		2% 1,200,000	1% 600,000	60,000
Children now receiving special services		90,000	120,000	11,000
Trained professionals available		11,000	9,000	650
Professionals needed to meet 60 percent of need		79,000 (8:1 ratio)	14,000 (20:1 ratio)	1,500 (20:1 ratio)
Existing training institutions		About 40	About 30	About 8
Current output of training institutions		About 500	About 400	About 240
Maximum capacity of training institutions		About 1000	About 800	About 400 + retraining elementary 300
Years to criterion – maximum capacity (60 percent goal)		79 years Year - 2049	33 years Year - 2003	4 years Year - 1974
Years to criterion (8 percent attrition)	Current support	Never	Never	Never
	Maximum support	Over 800 years	Over 200 years	8-10 years

may arise. Do we really wish to support a manpower strategy that won't satisfy minimum educational needs even while our descendents are exploring the solar system and nearby universes in the year 2770?

At a service ratio of 20 to 1, much higher than most experts would allow, we need about 14,000 more trained specialists to provide services to 60 percent of those who need them.

Perhaps the emotionally disturbed are a special case. Let us take learning disabled children in a similar analysis. Again, using the most conservative figure available for incidence, percent, we arrive at 600,000 children, ages 5-19, needing service. At a service ratio of 20 to 1, much higher than most experts would allow, we need about 14,000 more trained specialists to provide services to 60 percent of those who need them. Best figures now available suggest there are just about 9,000 specialists now at work, so we need to more than double the existing supply of trained personnal.

How many are our training programs turning out? We now estimate a maximum of about 400 "Masters Degree plus" specialists will be turned out in this area each year, and we can further estimate an attrition of 700. So you see, we are really not much better off. By doubling the existing capacity and assuming a reasonable attrition, we can meet our criterion of service to 60 percent of these children in about 200 years.

Each of us cannot have his own shoemaker or tailor and it appears that each child who needs help cannot have his own special teacher either. Can media and technology help? It had better.

The situation cries out for a new approach. Each of us cannot have his own shoemaker or tailor and it appears that each child who needs help cannot have his own special teacher either. Can media and techology help? It had better. The old crafts and guild approach to special education is the victim of a numbers game it can't win. Similar figures can be easily calculated on the delivery of health and legal services by current models. There is no way for existing medical schools with their current philosophies to turn out personnel to meet any acceptable standard of health care for all citizens. In all of these endeavors we must seek major innovations — new ways of organizing the delivery of services — with greater use of technology and new manpower models.

As we consider what is needed to enfold technology and media into the future plans of education, it would be well to make some estimate as to why the earlier enthusiasm with such devices as computer assisted instruction and and programed learning and the whole range of audiovisual devices so quickly evaporated. There is a score or more of companies still nursing their bruises from an earlier assumption that there was a rich and expanding market for all sorts of educational technology.

A recent report of the Commission on Instructional Technology (1970) has some pertinent things to say on this issue. This report was received with limited enthusiasm by the current administration for a number of reasons, not the least of which was that the report called for some substantial expenditures (about ½ billion dollars), at a time when the administration was trying unsuccessfully to balance a budget by controlling discretionary funds in education, health, and welfare. The report says among other things, "Our study has shown that one shot injections of a single technological medium are ineffective .... Technology, we believe, can carry out its full potential for education only insofar as educators embrace instructional technology as a system and integrate a range of human and nonhuman resources into the total educational program [page 7]."

One can agree with the above statement and also with the more flamboyant, but probably correct, statement:

> The changes required will probably be as thoroughgoing as those which industry underwent when it shifted from hand labor to mechanization. But a society hurtling into the age of the computer and the satellite can no longer be held back by an educational system which is limping along at the blackboard and textbook stage of communication.

But how is this change to be made? It is the engineering problem, as much as the creative future vision, that defeats us.

Needed Support Systems

What is it that is needed to provide the components of a continuous improvement program? Many people despair of such discussions because the cost is considered too great. Some five years ago, I observed that the American public will pay for anything that it considers sufficiently entertaining, important, or threatening. Education's problem is that it hasn't convinced the various publics that it is any one of those three.

There is one example in our own experience of the full acceptance by our society of the need for complex systems to do complex jobs. Unfortuantely, and it probably says something about our current society, our best illustration is in the area of the military. When we send an infantry platoon or company out into the field, those men are backed up by a maze of complex systems, all of which are working together to maximize the impact of that infantryman in the field. There is an involved supply system

and a Quartermaster Corps to make sure that he has all of the materials and the ammunition he needs; there is a complex intelligence system manned by specialists continually feeding back information on the infantrymen's own situation and on the situation of the people he has to meet in the field; there is a major system which links that operating unit with others in the field so that they can adjust their own performance accordingly. In total, the support troops far outnumber those troops on the line.

No matter how good that infantryman is, he is not likely to perform his tasks well unless all of his support systems are working effectively. To say that the infantryman is the most important part of this whole complex operation is a half truth. It is certainly true that he must be competent, or all of the other support systems will not help. On the other hand, if the support systems are not there he can very easily lose his battle or his life, not because he lacks courage or initiative, but because he has not been backed up with enough of the resources needed to do the job.

In most cases it is all too clear that the educational support systems necessary to get complex tasks done are not there . . . . just as the infantryman can fail because he is not backed up with good support services, so can the classroom teacher fail if he is not backed up with good support services.

I believe there is here a direct analogy to education. In most cases it is all too clearthat the educational support systems necessary to get complex tasks done are not there. It is a half truth to say that the classroom teacher is the most important person in education. Of course the classroom teacher is important, and all the educational support systems in the world filled with communications, new curriculum materials, and feedback information on student performance will not be worth anything unless the teacher is competant. But just as the infantryman can fail because he is not backed up with good support services, so can the classroom teacher fail if he is not backed up with good support services.

Needed System Elements

Let me sketch a few of the needed system elements as I see them.

Planning and Evaluation. One of the essential elements in an effective educational system would be the ability to plan nationally and have some means of getting continual output on the results of current programs. It is too much to ask that each small school system would have such special personnel to conduct evaluation studies, collect data on program impact, and project programs needs and costs over an extended period of time. But the technology of the computer clearly makes it possible for us to store and retrieve information much more easily. Such activities are not beyond the scope of the large municipal school districts and regional service centers that are now developing. They and the Office of Education must have such planning capabilities and their information systems must be compatible so that data collected in one community can be aggregated with information collected in another. The building of useable information systems that meet local, state, and federal needs is a painful process, but it is now underway, stimulated by the Office of Education, and can be a useful tool to all of us if there is an assignment of personnel to the administration of this task.

Perhaps one of the most important moves that some state departments of education and some school systems have made has been their development of planning and evaluation units within the major school organization.

Perhaps one of the most important moves that some state departments of education and some school systems have made has been their development of planning and evaluation units within the major school organization. When there are individuals in the school system who have the responsibility for generating a clear statement of objectives, for costing out the needed resources to achieve those objectives, for helping decision makers to identify alternative educational strategies, and finally for determining whether the school system has reached its objectives, then they can produce a major addition to the systemization of our educational effort.

Such a planning and evaluation effort could be of great value to special education in such new ventures as the current push to resource room services. No state can instantly change over from one educational pattern to another or even have the data available to make plans or allocate resources rationally, without a good planning and evaluation service.

Such planning has to have an objective. Let us say that 60 percent of the target population of children to be served will have service from trained personnel by 1975. We now want to answer such questions as:

> How many trained personnel now exist?
> How many persons need training to meet the additional needs?
> How many training institutions do we have to provide these services?
> What will the cost of such training be (cost in terms of personnel and cash)?
> How will the costs change from year to year?

A pencil and paper and some assumptions can provide you with a rough portrait. The responsible

decision maker will want much more precision than that. Let us take a simple example.

A rough needs analysis in the state of North Carolina would reveal a minimum of 60,000 children of school age who could be labeled educably retarded, learning disabled, or emotionally disturbed. Let us assume that the resource room concept would be implemented so that services would be provided for these children in one general resource room setting in the school. As a first step, we find out how many of these children are now under the care of a trained professional and calculate how many more will need to be trained.

Using a simple goal of 60 percent service and a 20 to 1 staff/student ratio, we will need to train about 1,500 more professionals to be resource room teachers. With about eight existing special education training institutions in the state, putting out a maximum of 240 specialists a year, almost all in EMR, we will need to make substantial additions to training resources if we are to stand any chance of attaining our modest goal.

Since there is supposed to be a projected surplus of elementary school teachers of about 250,000 by 1975, it would seem to be a good manpower tool to tap.

Realistically, three strategies lie open to us. The first strategy would be to retain existing elementary school teachers for the role of resource room teachers. Since there is supposed to be a projected surplus of elementary school teachers of about 250,000 by 1975, it would seem to be a good manpower tool to tap.

Second, we could retrain existing special education teachers not now certified for the role of diagnostic teaching and counseling of other teachers who would be required in the new organization of resource rooms. A good special education teacher would probably take less time to train in this approach, but we would probably be merely shifting one person to fill one vacancy while we created another where he or she came from.

Using the most conservative of figures, it should cost about 2.5 million dollars to provide the 1,500 additional personnel needed to deliver a quality level of service to 60 percent of those students who need it.

Third, we could attempt to recruit more resource teachers from the preservice programs by helping the universities reorient the nature and direction of their preservice programs. Each of these strategies is going to require substantial sums of training money. Using the most conservative of figures, it should cost about 2.5 million dollars to provide the 1,500 additional personnel needed to deliver a quality level of service to 60 percent of those students who need it. This cost is strictly the cost of training these additional persons and must be provided by the state or federal government if any type of quality is to be expected.

If a major psychological barrier to such planning exists among educators it is first, *Who does the planning?* and second, *Do I really want outsiders collecting information on my operation?* First of all, we should make clear that a planning office does not *do* the planning for a state or a region or a city. It provides the necessary information and projections to allow the responsible decision makers, whether the superintendent or director of special education or whoever, to have better data available. Major representation of local interests has to be provided in the establishment of regional or state objectives and in the designing of the strategies to meet these objectives. In terms of not wanting anybody "to see my operation," those days are over. The public wants to know what it is getting for its money and will demand educational accountability from special education and from all education.

There are some fundamental truths that are well known to people who work in special education that are practically unknown to the general public. I suppose that each profession, whether it be medicine or law or whatever, has such general understandings within the profession. One of these general understandings has to be made clear to our clients and to the general public as we pursue the whole matter of accountability.

> *It is extremely difficult to modify the established patterns of behavior or performance of children, and the more severe the problem the child has the greater the difficulty of modifying his performance.*

This general principle is not big news to people in special education. It *is* big news to the general public because not only have educators not told them this fact directly, but they have implied that, given sufficient money and resources, there is hardly anything that is not possible within the framework of education.

It is possible to change an unmotivated frustrated educable retarded child into an effective participant in our society, but it isn't easy and it requires a great deal of personnel resources and money.

It's important to recall that I said it is very difficult to change the established patterns of children — I did not say it was impossible. It is possible to modify adjustment patterns of an emotionally disturbed child so that he becomes functional in our society, but it is not easy and will

cost a great deal in both personnel resources and money. It *is* possible to change an unmotivated frustrated educable retarded child into an effective participant in our society, but it isn't easy and it requires a great deal of personnel resources and money. We need to tell the public the true nature of the educational task, not as an excuse, but as a way of presenting what the realistic expectations are. Our reach should always exceed our grasp. We should always be trying to do better than we have done, but we need to be much more precise as to what we finally expect to happen as a result of our efforts.

Even if these manpower needs are costed out properly, it will be doubtful if long range improvement will be obtained unless other system components are put into place. What is needed to provide the teacher with the same type of support system backup that we provide for infantrymen?

Training. I have already discussed the problems inherent in some of our special education manpower development programs. The isolation of these programs from the consumer and the lack of feedback on the training programs' effectiveness have caused their program design to reflect more the inner pressures of the training institution — the university — than the needs and demands of the marketplace. New linkages have to be forged which will integrate training with the other activities in the total system. The university training programs need to be more responsive to state and natural manpower needs on one hand and have more of a say in major state planning on the other.

I have previously suggested the establishment of consumer advisory committees for university training programs as one means to provide needed consumer feedback to the trainers. This proposal has been met with embarrased silence within the university community. Major school units, such as large cities or regional centers, need to have a training program and staff of their own to handle inservice, demonstration, and practicum supervision activities. The basic service unit itself must take responsibility for its own on-the-job training, while the universities concentrate on advanced training of those who will direct the inservice efforts. This local training unit would provide another linkage with the university based training program.

Those with major responsibilities in training should be required to spend every third summer or more in refresher courses on the newest developments in such areas as curriculum and media development so that a continuous linkage is formed between research, development, and training. In some fashion or another, we need to break through the remote castle-on-the-hill concept of the training institution that has been our history and substitute system linkages that tie it to our other components.

Research and development. We will need a much more sustained and expanded support of research and development in education than has been true in the past. We have already heard suggestions to set aside 1 to 2 percent of the local educational budget that would be used for design and developmental efforts at the local level. This is a good move, but it will not pay off unless we can establish the research and development activity as a key component of the local organizational structure. Until the local school unit becomes involved in developmental activities, it will not likely be receptive to activities elsewhere.

We need a much greater recognition among our public policy makers about the longterm nature of research and development and the fact that a substantial number of the efforts that will be undertaken will not produce anything of a momentous character.

We must support the major research institutions—institutes, centers, and laboratories that will provide a sustained and extended attack on the wide variety of complex educational problems still plaguing us. It seems likely that such major support will have to come from the federal government. President Nixon's proposal for a National Institute of Education that would be the central focus of federal expenditures of educational research and development money seems to have some genuine promise, *if* the budget that accompanied the establishment of that Institute could be raised to 1 percent of the total educational expenditure instead of the .4 percent that now exists.

We need a much greater recognition among our public policy makers about the longterm nature of research and development and the fact that a substantial number of the efforts that will be undertaken will not produce anything of a momentous character. We accept this fact in the biological sciences; we do not expect every investigator seeking a vaccine for polio or rubella to discover it.

I rencently listened to the two scientists who discovered the new rubella vaccine describe their efforts which took an extended period of time and resources. The successful vaccine was obtained after a few hundred other efforts had proven unsuccessful. If they had been called before a congressional committee after they had tested 100 possible vaccines, we might have said that their research was a failure and not worth supporting. We need to have the

same longterm tolerance for research work in education that we accept wisely in the medical sciences.

In those areas such as media and technology, large investments need to be made over an extended period of time to test major new delivery system concepts in education. In this respect, the consumer needs to have much more say than he has now on what major objectives are undertaken. We are inclined now to consider the success of *Sesame Street* as a foregone conclusion and to say that the $8 million to produce the first set of programs and the larger amount being asked for the second series is well worth it.

But at the time of the initial commitment of funds, few were certain that young children could be taught by television with the use of commercial type jingles. It was an act of some administrative courage to commit such a large sum of money on such an untried project. It does not take much imagination to think of the fun critical Congressmen or critics of education could have had with such a financial commitment, if the project hadn't worked out well.

Perhaps the greatest need that research and development in education has, besides some faith on the part of the decision makers, is a means of translating their activities and results into educationally useable information for the teacher. This may require another component in the total system.

Educational communication centers. Another substantial system need is a local educational communications center. Here we need to have persons in the school system who are committed to the distribution of new ideas and new materials, who are in direct communication with research laboratories and centers and training institutions, so that the latest in new materials and procedures are systematically delivered to the teachers on the firing line. This means much more than a traditional library or materials center where the staff waits passively for somebody to come and get the materials or equipment. It means a very active role of demonstrating, of giving shortterm training, of providing not only information but the requisite skills so that the materials can be used in the framework of the teacher's own personnal situation.

The Special Education Materials and Media Centers concept is one of the most innovative and useful ideas in all of education.

The Special Education Materials and Media Centers concept is one of the most innovative and useful ideas in all of education. We need to build on these initial efforts so that a truly effective communication network is available. One of the prospective activities of the Frank Porter Graham Child Development Center at U.N.C. would be the establishment of such a communications center for early childhood programs.

We could support, for 5 years, various *centers of excellence* within states and regions that would illustrate the best of how and what we know in terms of educating the gifted, the mentally retarded, the emotionally disturbed, the deaf, the blind.

Demonstration centers of excellence. As one final component in an effective educational system, we need to demonstrate the best of what we now know in our various speciality areas. We could support, for 5 years, various *centers of excellence* within states and regions that would illustrate the best of how and what we know in terms of educating the gifted, the mentally retarded, the emotionally disturbed, the deaf, the blind. It is very difficult for administrators charged with the parceling out of state funds to pick out one or another area or community in the state for special attention. The easy way, and the way which is often almost mandated by state law or regulations, is that everybody should get the same amount of resources. In a practical matter, what that means is that everybody starves a little bit, and nobody is able to demonstrate how much benefit a well fed program can provide.

The advent of federal funding does allow the states to pursue this goal of *centers of excellence*. I can think of no better or more constructive use for these additional funds than to suggest that they provide enough resources for a particular program that can truly demonstrate what is possible under good circumstances, rather than under marginal circumstances.

Anyone who takes on the task of sketching out what ought to be, rather then what is, always runs the risk of being accused of so much fantasy. The hard headed practical man will always say: Who will pay for all of these new system components? We have trouble even getting enough pencils for our teachers, much less fancy communication centers, research and planning units, and so forth.

We might better approach such an issue from another direction. One estimate that has been made on the total cost of the educational enterprise in the United States is about 60 billion dollars a year, far more than any other activity except for national defense.

Since we are investing this staggering amount of money now, the proper question is how much are we willing to spend on:

1. Research and development to provide us with more effective programs and procedures.

2. Training activities to guarantee quality manpower.
3. Demonstration activities to illustrate new and better programs.
4. A planning and evaluation effort to help allocate those sums wisely.
5. A communications system to help educators keep in touch with new developments.

Even the most enthusiastic cost estimates of the specialists in any of these activities could amount to a miniscule fraction of the total 60 billion now being expended. We ask for and need the same support for the frontline teacher that we provide for the frontline infantryman. The critic who doesn't like these suggestions must still come up with some answers of his own to the issues that have been outlined here.

If we expect to get such resources, we educators in turn must be willing to become *accountable,* to be more responsive to consumer needs, to communicate to all of our publics, and to bear the anxieties and frustrations that will be an inevitable companion to the establishment of a modern educational *system.* But we will be better off it we accept the philosophy of the late Robert Kennedy who said so often:

Some men see the world as it is and ask, "Why"
I dream of things that never were and say, "Why not?"

Reference

To Improve Learning. Report of Commision on Instructional Technology, Committee on Education and Labor, House of Representatives, 1970.